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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/493,579 | 01/28/2000 | Eric Christian Hince | GEO-3.0-001-(DIV)-(2) | 2426 |

7590 11/28/2001
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EXAMINER

REDDING, DAVID A

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1744

DATE MAILED: 11/28/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/493,579

Applicant(s)

HINCE ET AL.

Examiner

David A Redding

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 48-51 and 53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 50 and 53 is/are allowed.
- 6) ☒ Claim(s) 48,49,51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. Applicant's arguments filed 8/17/01 have been fully considered but they are not persuasive.

Claim Rejections - 35 USC § 102

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claim 51 is rejected under 35 U.S.C. 102(b) as being anticipated by Merk Index (pp.4944).

The claim as drafted, broadly defines a composition which includes, in whole or part, minerals containing Fe(III) including Fe(III)OH and equivalents thereof. Iron III compounds are naturally occurring in the form of Magnetite and limonite and are considered, in the natural state, to read on the claims.

4. Claim 51 is rejected under 35 U.S.C. 102(b) as being anticipated by any one of USP 5,508,194 (Lee); USP 5,620,893 (Hogan); USP 5,811,255 (Hunter).

The Lee patent discloses a nutrient composition which includes iron chloride (III) (col.4, line 49). The Hogan patent discloses adding a composition of Iron III in the form of magnetite to treat contaminated waters (col.13, lines 34-46). The patent to Hunter discloses adding a composition including Iron III for iron-reducing bacteria (col.23). Since the iron compounds disclosed in the patents are the same as that which is claimed it is presumed that the compounds are capable of being used as an electron acceptor for manganese-reducing bacteria.

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Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,299,613 (Cararelli) or USP 5,582,627 (Yamashita) or USP 5,804,435 (Kurane) in view of the Merk Index.

Cardarelli discloses a composition containing Manganese chloride (col.18, Table X). The patent to Yamashita discloses a composition for microorganisms containing manganese nitrate (col.6). The patent to Kurane discloses a composition for microorganisms containing manganese chloride (col.6, line 60). Since the compositions contain the identical compound claimed, it is presumed that the disclosed compounds are capable of performing as electron acceptors for manganese-reducing bacteria, as claimed. A review of the Merk Index reveals that the sources of manganese include pyrolusite. Accordingly, it would have been obvious to prepare the manganese compositions disclosed in the referenced patents using manganese from pyrolusite in view of the fact that pyrolusite is a known source of manganese.

Allowable Subject Matter

7. Claims 50 and 53 are considered to be allowable over the prior art of record.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

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Response to Arguments

8. Applicants main argument is that the prior art of record does not disclose the compositions use as electron acceptors. However, the courts have held that "[p]roducts of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the same chemical compound, the properties (ability to act as an electron acceptor) applicant discloses and/or claims are necessarily present. *In re Spada*, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP 2112.01.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A Redding whose telephone number is 703-308-3910. The examiner can normally be reached on M,T,Th,Fr, 7:30-6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Warden can be reached on 703-308-2920. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



David A Redding
Examiner
Art Unit 1744

D.A.R.
November 19, 2001